

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A tire building machine comprising a bead core transfer device including a pair of clamp portions for clamping a pair of bead cores, respectively, and placing the clamped bead cores at positions axially spaced from each other by a predetermined distance, and a band drum having an outer peripheral surface for applying a carcass band thereon and causing a radial expansion of at least an axial portion of the carcass band so that it is pressure-bonded to inner peripheral surfaces of the bead cores, said tire building machine further comprising:

band drum rotation angle control means for rotating the band drum on which the carcass band is applied, by a required angle that is determined by a radial force waveform obtained, before building of a desired tire, with respect to a tire of the same size, or by a characteristic waveform having a correlation to said radial force waveform; and

inclination control mechanism for causing a center axis of at least one of the clamp portions of said bead core transfer device to be inclined relative to a center axis of the band drum, in a predetermined direction, and by a required angle that is determined by said waveform,

a forming drum for applying to a radially outer side of a carcass band, which has been transferred from said band drum and to which said bead cores have already been applied, remaining tire constituting members, and

a forming drum rotation angle control device that controls the forming drum to rotate by an angle equal to said required angle that the carcass band drum rotates by said band drum rotation angle control means, in an opposite direction.

2-4. (Canceled)

5. (Currently Amended) A method for building a tire comprising bead cores, and a carcass extending toroidally between the bead cores and having side portions that are turned-up radially outwards around the bead cores, wherein said method comprises:

preparing a ~~presumption~~ formula for ~~presuming~~calculating a first order harmonic component of a radial run-out ~~waveform~~waveform of toroidal carcass body ~~that generates, wherein the first order harmonic component is generated by~~ positional or angular deviation between a center axis of a cylindrical carcass band and a center axis of the bead core;

measuring a radial run-out of the toroidal carcass body of a previously built tire along its entire circumference, and obtaining an inverted first order harmonic waveform by inverting a measured waveform of the radial run-out, or by inverting a first order harmonic component extracted from said measured waveform of the radial run-out, wherein the toroidal carcass body does not include a belt member or a tread rubber member;

obtaining, upon ~~subsequent~~ building of a tire having the same size as said previously built tire by the same building machine, a positional or angular deviation between a center axis of a cylindrical carcass band and a center axis of the bead core, which generates said inverted first order harmonic waveform, based on calculation using said ~~presumption~~ formula, wherein the positional or angular deviation is to be considered for building the tire; and

changing the relative position or relative angle between the center axis of at least one of said bead cores and the center axis of the carcass band to be built for the tire, in a direction of the deviation and by an amount of the deviation, obtained by said ~~presumption~~ formula, respectively, ~~so as to set the bead cores to the carcass band.~~

6. (New) A tire building system, including a tire building machine comprising a bead core transfer device including a pair of clamp portions for clamping a pair of bead cores, respectively, and placing the clamped bead cores at positions axially spaced from each other by a predetermined distance, and a band drum having an outer peripheral surface for applying a carcass band thereon and causing a radial expansion of at least an axial portion of the carcass band so that it is pressure-bonded to inner peripheral surfaces of the bead cores, said tire building system comprising:

an angle calculation device that determines the required angle by a radial force waveform obtained, before building of a desired tire, with respect to a tire of the same size, or by a characteristic waveform having a correlation to said radial force waveform,

band drum rotation angle control means for rotating the band drum on which the carcass band is applied, by the required angle calculated by the angle calculation device; and

inclination control mechanism for causing a center axis of at least one of the clamp portions of said bead core transfer device to be inclined relative to a center axis of the band drum, in a predetermined direction, and by the required angle that is determined based on said waveform.

7. (New) The tire building system according to claim 6, further comprising:

a forming drum for applying to a radially outer side of a carcass band, which has been transferred from said band drum and to which said bead cores have already been applied, remaining tire constituting members, and

a forming drum rotation angle control device that controls the forming drum to rotate by an angle equal to said required angle that the carcass band drum rotates by said band drum rotation angle control means, in an opposite direction.